

By Lieutenant Colonel Ronald E. Zimmerman, Captain Caitlin M. Dempsey, and First Lieutenant Haley E. Whitfield

n 10 May 2008, the 62d Engineer Battalion (Combat) (Heavy) assumed responsibility from the 864th Engineer Battalion (Combat) (Heavy) at Forward Operating Base Sharana in Afghanistan. In preparation for this, our home station training at Fort Hood, Texas, focused on four priorities:

- Building roads, operating bases, and force protection in support of maneuver forces
- Developing strong leaders who inspire their Soldiers with the will and skill to win in combat
- Training Soldiers on basic combat and engineer-skill tasks
- Developing strong Family Readiness Groups (FRGs) and rear detachments

We capitalized on unique training opportunities to develop junior leaders at Fort Hood during our predeployment training. Our training built cohesive teams with Soldiers who shared a common bond, grounded in Warrior Skills. Finally, we built strong FRGs and rear detachments to take care of each other. Eight months into our deployment, our experiences continue to teach and challenge us. This article is an effort to share the experiences of our preparations for deployment and the personnel, logistical, and tactical challenges we have faced.

Warrior Skills as a Command Training Base

ey to our force protection success is engaged leadership and Warrior Skills training as a prerequisite to our home station mission-essential task list (METL) (construction) training. At Fort Hood, we used a battalion "gate strategy" as a control mechanism in developing trained and sustainable companies and platoons. We focused on ensuring that all Soldiers possessed the individual skills necessary to accomplish their combat portion of the mission, thus surviving in a combat environment. We focused on achieving superior skills with weapons and marksmanship, reflexive fire, first aid, communication, navigation, and physical training. We reinforced basics such as land navigation, map reading, combat vehicle identification, proper operation of assigned equipment, and the effects of personal and crew-served weapons. We aggressively trained on convoy procedures, escalation of force, and counter improvised explosive device (C-IED) drills. We used lessons from the battalion's last Operation Iraqi Freedom deployment, our Army's current doctrine, and keys tasks from the unit being relieved in place—to include training on composite risk management—to shape training management at all levels within our battalion.

We found that protection—force protection, safety, fratricide avoidance, and field discipline—of Soldiers and their equipment requires engaged leadership. "Checking the block" by having platoon and company leadership complete composite risk management website classes is not sufficient. Every activity, action, and engagement must be assessed for risk. Leaders must be on the ground looking for negative trends and ensuring that risk mitigation factors are properly implemented. Supervisors who assist in unloading a truck are no longer supervising and thus have opened up the task for a mishap. Our underlying principle for protection is engaged leadership and a steadfast enforcement of standards and discipline, regardless of the task or location.

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Effects on Officer Development

fficer promotions come earlier than in the past. Second lieutenants are promoted to first lieutenant in 18 months and are then promoted to captain 16 to 20 months later. With time spent attending the basic officer leader course (BOLC), and many officers attending schools such as Airborne, Ranger, and Sapper after BOLC, second lieutenants may be in a unit for only 6 to 8 months before pinning on first lieutenant bars. At that point, young officers are getting ready to move to either a company executive officer position or a headquarters staff position. This means that many of today's officers have very little time to learn and grow as platoon leaders. Because growth comes from institutional knowledge and experience, many of our young officers lack the cumulative advantage and practical intelligence associated with years of experience. The growth of young officers requires practical learning engagements that come from 12 to 18 months as a platoon leader. If officers had additional platoon leader time before promotion to captain, they would learn more of the basics needed to build on throughout the rest of their careers. This also affects the ability of a commander to send a promotable first lieutenant to the career course. Often, that lieutenant may not have experienced various jobs within the battalion before moving on.

The opposite side of that argument is that young officers frequently complete their platoon leader time in combat. To use the "drinking from a fire hose" analogy, today's platoon leaders are learning more in a shorter amount of time because of current wartime situations. A young lieutenant learns more quickly by leading Soldiers in combat than by just training with them at home station, although sometimes the lesson is a shortcut rather than the standard. Thus, our model of officer growth should account for combat experience, maturity, and career desires. We should focus on quality of leadership and practical experience, versus time in a leadership position.¹

Out-of-Cycle Deployments

ut-of-cycle deployments under the auspice of modularity are negatively affecting our flexibility in officer and noncommissioned officer (NCO) development. The battalion has five companies deployed to Afghanistan and one to Iraq. However, there are only three companies the battalion commander has flexibility in moving officers and NCOs through. Transfers within the battalion are impossible with the company in Iraq. One of the companies deployed to Afghanistan three months ahead of the rest of the battalion and has a home station at Fort Sill, Oklahoma, rather than Fort Hood. As a result, officers and NCOs can only be moved in or out of that company for short periods and must return to their original company for redeployment. Another company, although based at Fort Hood with the majority of the battalion, deployed two months ahead of the battalion. Its officers and NCOs also can be moved for only short amounts of time because they have to redeploy with their original company.

These restrictions limit the transfers the battalion commander can order within the battalion to move captains and promotable first lieutenants. More important, out-of-cycle deployments and modularity can inhibit officer growth in connection with early promotion cycles. Planners at the United States Army Forces Command (FORSCOM)-level must pay close attention to out-of-cycle deployments. Just because we can deploy engineer companies outside their parent battalion headquarters does not necessarily mean we should.

Demand for Sustainment Engineers in Stability Operations

ounterinsurgencies and stability operations like the current War on Terrorism are taxing on engineer units. In high-intensity conflicts, the infantry, armor, and other combat units bear much more of the brunt of responsibility. A combat heavy engineer battalion's role is inversely proportional to the intensity of the conflict. In counterinsurgency operations, engineers—and more specifically, construction engineers—bear a greater amount of responsibility. As the United States expands to remote areas of Afghanistan for security purposes and helps build infrastructure there, construction engineers are either doing the construction or executing quality assurance and quality control of local national construction. Construction engineers in most cases are either building new forward operating bases (FOBs) or expanding existing FOBs well before the arrival of maneuver forces. We have found that it takes nearly two-andone-half months to build a battalion task force-level operating base. Before a maneuver unit sends a squad of Soldiers to a tiny outpost for weeks at a time, engineers are sent there to build up the observation post and make it as livable as possible for the maneuver Soldiers. Naturally, security is provided by maneuver forces. Engineers are in such high demand during stability operations that it makes it even more difficult for an engineer commander to release any veteran officers or NCOs.

The high demand for engineer units during this everchanging counterinsurgency fight also results in more frequent deployment cycles for the engineers. During home station predeployment training, deploying unit commanders are reluctant to transition unit-level leadership as teams are forming. There is little time for retraining new team, platoon, company, or staff leadership. Commanders become even more unwilling to release officers and NCOs in exchange for untrained new additions to the battalion. However, if the officers and NCOs are going to continue their development, they need to move on to Army schools. Commanders must accept that they might not have a full year of training with a group of officers and NCOs and then deploy for 12 months with that same group of Soldiers. More important, the United States Army Human Resources Command (HRC) must fill units on a steady cycle versus once per year. Yearly dumps of second lieutenants straight out of the basic course, compared to a steady flow of replacements, lead to massive changes.

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Standard Guard Tower Construction

Officer replacements and school slots must be aligned with redeployment of units. The increased need for engineers has created out-of-cycle deployments for engineer companies that negatively affect officer development.

Legacy Battalion in Dispersed Operations

egacy combat heavy engineer battalions are not designed for dispersed operations. Until recently, the 62d Engineer Battalion was the only construction battalion in-theater during expansions in Regional Command–East (RC–E) and Regional Command–South (RC–S). The battalion is a legacy modified table of organization and equipment (MTOE) engineer battalion operating as a transformed modular unit dispersed across a wide area. Our staff is not nearly as robust as a transformed battalion staff. Controlling the expansion of multiple battalion- and brigadelevel operating bases, while simultaneously controlling upgrades of existing operating bases, greatly stretched our doctrinal command and control (C2) capabilities. We now have four C2 nodes to support expansion and sustainment construction at—

- FOB Sharana, the battalion tactical operations center (TOC).
- Bagram Air Base, the battalion administration/logistics operations center.
- FOB Shank, where RC–E is being expanded to support the arrival of a brigade combat team (BCT).
- Kandahar, in support of RC-S/Task Force 2-2 Infantry expansion, which will soon move north to FOB Wolverine.

Each of these command nodes requires additional personnel and equipment above MTOE authorization. To maintain an aggressive maintenance posture, the battalion uses four different supply/support activity locations. Soldiers fly out

of Kandahar and Bagram for rest and recuperation leave and redeployment because of our dispersion. Liaison officer teams are located at each Class IV construction material site to maintain visibility of inventories and the status of material being pushed from the Class IV yard to the construction site. The battalion purchased 20 satellite telephones and minutes for improved C2 and for Soldier morale, given the units' remote locations. In the end, our MTOE relevant to C2 does not fit the current dispersed construction fight. However, thanks to non-

traditional methods, we maintain construction efforts in spite of the increasing construction requirements.

Class IV Management

equisition and battle-tracking of Class IV construction material and the lack of host nation trucking reliability are unique challenges within Afghanistan. Contractorrun Class IV yards control construction material. There are five supply yards in-country responsible for filling and shipping our construction material. While each Class IV yard performs the same function, they do not all provide requesting units the same information necessary to acquire and track a bill of material (BOM) in the most efficient manner possible. Class IV yards are responsible for loading and shipping material to each project site. However, they do not accurately keep track of the material they ship to each site, and each yard has a different standard for reporting what it has shipped. Members of the logistical community work hard at maintaining their Class IV yards. However, they do not understand construction well enough to realize how important Class IV management is to engineers or how management of construction material must be treated differently from other classes of supply.

As mitigation, we recently created liasion officer teams at Class IV yards to provide visibility on inventory and jobsite shipment amounts. However, 3- to 4-week project delays are common due to operational impacts and bad weather. There are no Army truck companies in-theater, which means that all construction materials travel by host nation trucks. Delayed delivery resulted in wasted time, material, and money. Education about project management and vulnerability identification of tactical risks remains paramount for officers, given the fluid construction environment. Company commanders identify project vulnerabilities, mitigation, and decision points (complete with priority intelligence requirements, friendly force information requirements, and essential elements of

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friendly information, given insurgent attacks associated with movement of Class IV materials and equipment).

Finally, engineers should simply take on and resource the task of Class IV management, similar to the standard in which we associate our actions with the BCT support battalion for Class IV/V supply points and mine dumps. Our plugs into the sustainment brigades would then be mission-essential tasks for battalion and brigade headquarters.

Standard Building Designs

tandard building designs have greatly increased efficiency in project management, construction, and acquisition of Class IV construction material. At the time of the battalion's arrival, different designs for similar buildings were used at each construction site. Three months into the deployment, a massive effort began to expand existing operating bases to receive additional maneuver forces repositioning to Afghanistan. Joint Facilities Utilization Board (JFUB) packets with incomplete designs were rapidly completed in order to jump-start the construction process.

"Key to our force protection success is engaged leadership and Warrior Skills training as a prerequisite to our home station mission-essential task list (METL) (construction) training."

However, the lack of detailed plans resulted in project delays caused by inaccurate material ordering and frustrated movement of high-priority Class IV materials. To mitigate these issues, the battalion developed standard building designs for guard towers, semipermanent wooden "B-huts," Southeast Asia hut TOCs, helicopter landing zones (HLZs), and company-level contingency operating posts (COPs). Each design focused on available lumber versus off-the-shelf dimensional lumber. For example, the guard tower design called for 21-foot lengths of 8-inch by 8-inch lumber, but the best we could get in Afghanistan was 16-foot lengths. To gain the same load strength as 8-inch by 8-inch columns, we spliced and laminated five 16-foot lengths of 2-inch by 8-inch lumber, using designated nail and bolt patterns.

We implemented battalion standard designs based on subject matter expert and company-level experience. Building guard towers, B-huts, and TOCs were one company's strong point, while another company became known as our "cash cow" because of its ability to quickly build company-level COPs. Yet another company built most of the "hard huts," (B-huts with indirect-fire protection) in RC–E. Our horizontal

assets built most of the HLZs and fuel farms, so their expertise became the battalion benchmark. Overall, standard designs increased our productivity in ordering BOMs and improved jobsite quality control and quality assurance. Standard designs greatly aided in construction rehearsal before beginning a project since squad leaders could determine their work effort and team taskings.

Moving a Combat Heavy Engineer Line Company

raversing the battlefield provided many challenges to a combat heavy engineer line company that maneuver forces do not face. Frequently, mission dictates the movement of a single construction company, or even platoon, more than 300 kilometers with heavy engineer equipment. By MTOE, one engineer company consists of five M916 tractors with M870 trailers. A routine FOB construction mission typically requires 10-15 pieces of heavy engineer equipment, to include bulldozers, hydraulic excavators, bucket loaders, rollers, graders, and scrapers that weigh up to 76,000 pounds. Due to their limited number of organic transportation assets, engineer units are forced to rely on the support of host nation trucking, which could cause project delays, increased maneuver time between construction sites, and increased threat to Soldiers. To mitigate the obvious risks, units are forced to integrate the local national trucks into their convoys to ensure the security and timely arrival of their equipment and materials. If a request were submitted for ten 40-foot, flatbed local national trucks, only six would show up on the specified date with adequate specifications. Many local nationals overestimate the quality of their personally owned trucks. It is not uncommon to destroy the axle of a local national truck or turn a truck on its side during the process of loading a scraper or bulldozer in preparation for movement to the next construction site. The local national trucks are not equipped to support the weight of up-armored engineer equipment.

Adding local national trucks to a ground assault convoy greatly reduces the average speed and greatly increases the probability that the convoy will need assistance. Whether it is a flat tire, inadequate fluids, engine failure, or the mere inability to transport the assigned load, the host construction-maneuvering unit is forced to assist or recover the deadlined local national truck. This can force a convoy to stop in the middle of hostile terrain to provide support to the local national to ensure the safe arrival of the unit's equipment. Forcing a combat heavy engineer unit to stop and dismount adds a significant level of threat to an already dangerous mission of traveling across the battlefield. Heavy construction engineer units are not equipped to precisely maneuver, effectively engage, and actively pursue the enemy, characteristics that are commonly found in light maneuver units. Uncoiling a heavy construction engineer unit takes a great deal of time and precision that higherechelon command units may not take into account during their planning process.

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Conclusion

aintaining focus on the mission is essential, regardless of the time remaining in our deployment. Our challenge is not to lose focus or become complacent in enforcing standards and discipline. Each construction task is another opportunity to increase work efficiency, sustain our Warrior Spirit, and maintain our position as builders of choice. Communication remains paramount as we continue to find every opportunity to mentor and develop the battalion's Soldiers and leaders. Moreover, given the battalion's dispersed environment and limited communication, each command visit is a detailed leader engagement that targets young leaders. We must communicate that deployment relief is in sight. More important, we must communicate that senior Army leadership is addressing improvements in schooling, assignments, and dwell time. Our Soldiers and leaders deserve honest dialogue on how no other organization in the world could sustain what our Army has completed over the last decade.

Lieutenant Colonel Zimmerman is Commander, 62d Engineer Battalion, now deployed to Afghanistan. Prior assignments include chief of plans for the 4th Infantry Division's initial assault into Iraq; operations officer for the 299th Engineer Battalion; operations officer for 1st Brigade Combat Team, 4th Infantry Division; and chief of plans for the 4th Infantry Division's second Operation Iraqi Freedom deployment. He holds a bachelor's in civil engineering—structures from the University of Wisconsin-Platteville, a master's in engineering management from the University of Missouri—Rolla (now Missouri University of Science and Technology), and a master's in airpower art and science from the School for Advanced Airpower Studies.

Captain Dempsey is the assistant operations officer and engineer Class IV manager with the 62d Engineer Battalion. Prior assignments include company executive officer and horizontal platoon leader. She holds a bachelor's in elementary education from Wake Forest University.

First Lieutenant Whitfield is the 62d Engineer Battalion assistant operations officer and battle captain. Previous assignments include vertical platoon leader and executive officer. She holds a bachelor's in engineering management from the United States Military Academy.

Endnote

¹ The retention of officers and NCOs is likely affected by the strain in the United States Army between mission accomplishment and officer development. The operational tempo in today's Army has caused a backlog of officers and NCOs in many units. Units are reluctant to release officers or NCOs because they have been trained for the upcoming deployments. Commanders, understandably, do not want to lose that training by releasing the veterans and deploying with new officers and NCOs. This is causing a long-range deterioration of both the officer corps and the NCO corps. Three factors are probable reasons that units do not release officers and NCOs in a timely manner that would benefit their careers. These factors, which are specifically focused on engineer units, are—

- Early promotion of young officers.
- Heavy use of engineers during counterinsurgency fights.
- Modularity or out-of-cycle deployment of engineer companies without their parent battalion headquarters.

I contend that we must understand from their viewpoint the challenges our junior leaders are experiencing within the United States Army. Accelerated timelines for officer promotions, high demand on engineer units for deployment purposes, and the structure of engineer units are, to some degree, causing friction with our young officers. We must communicate with our company-grade officers the same way we do with our young Soldiers. Senior leaders must understand the difference in generational perceptions between themselves and their junior officers and NCOs.

It is important for senior leaders to understand that our "Generation Y" leaders (those born after 1978) grew up in a climate of uncertainty, in which their adolescent years may have included the experience of parents divorcing and job loss. Members of Generation Y worry about their financial future, especially with today's market meltdown. As a result, they are less inclined to be loyal to—or feel a connection with—their work place. They expect instant gratification because they have faster access to information, thanks to technology. They prefer challenges to their abilities and thus career advancement. When we put into context the perceptions about Generation Y, such as the desire for instant gratification, preference for a casual environment (not to be confused with lack of professionalism), feeling of entitlement to job benefits they've not yet earned, and comfort with technology, we see four basic challenges from their viewpoint:

- Twelve- to fifteen-month deployments with minimal dwell time translates to minimal time with family when not deployed.
- Officers are stuck in the same unit too long when they deploy twice over the course of four to five years. (This may be a double-edged sword in that some young officers are probably interested in having multiple changes of station, as opposed to those with families, who probably wish for longer assignments to reduce the number of moves.)
- The Army system of formal training is not intellectually stimulating enough, considering their usual level of education.
- There is too much micromanagement, which does not empower company-grade leaders.

Taken in context, this list becomes a tool to gain a better understanding of the strain between mission accomplishment and officer development in order to reach a balance between operational deployments and officer retention. (California State University, Fullerton, "The Gen Y Perceptions Study," http://www.spectrumknowledge.com/signatureprograms/index.html, 2008.)

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